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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,581	01/27/2004	Akio Uchiyama	17406	3837

23389 7590 11/29/2006

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EXAMINER

KASZTEJNA, MATTHEW JOHN

ART UNIT	PAPER NUMBER
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3739

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/766,581

Applicant(s)

UCHIYAMA, AKIO

Examiner

Matthew J. Kasztejna

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 14-16, 24 and 26-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 14-16, 24 and 26-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Notice of Amendment

In response to the amendment filed on September 5, 2006, amended claims 11 and 24 are acknowledged. The current rejections of claims 11, 14-16, 24, 27, 29-32 and 36 *stand*. The rejection of claims 26, 28, and 33-35 are *withdrawn*. The following new and reiterated grounds of rejection are set forth:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 14-16, 24, 27, 29-32 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0103417 to Gazdzinski in view of U.S. Patent No. 6,724,418 to Takahashi.

In regards to claims 11, 15, 24 and 36, Gazdzinski discloses a capsule medical device 300 inserted into a body cavity, comprising: a sensor 1010, a transmitting device for transmitting sensing data acquired by the sensor to an external device outside the body cavity (see Paragraph 0015); a receiving device 1027 for receiving data from outside the capsule medical device the received data being inherently generated by external signal processing of the sensing data (see Paragraph 0038); and a storage device 1026 wherein storage data stored therein can be rewritten on the basis of the

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data received by the receiving device (see Paragraph 0015). A flash memory of the digital signal processor may be modified by way of program data transmitted to the probe via the data transfer sub-circuit. Furthermore, Gazdzinski discloses a capsule medical device wherein the capsule medical device has an image-acquiring device 1010 being a CCD image sensor; and the image-acquiring device operates on the basis of data parameters stored in the storage device (see Paragraph 0067). However, Gazdzinski is silent with respect to a detecting circuit provided in the external device for calculating a luminance distribution of the images and a correction amount calculating circuit provided in the external device for generating data parameters from the luminance distribution calculated by the detecting circuit. Takahashi teaches of an analogous endoscope having a luminance calculator, which successively calculates a luminance value indicating brightness of the object image, and a determiner (see Fig. 1 and Col. 2, Lines 5-40). It would have been obvious to one skilled in the art at the time the invention was made to include a detecting circuit and a correction amount calculating circuit in the apparatus of Gazdzinski to generate transmission information on the basis of data transmitted by the capsule medical device and received by the external device to provide a surgical capsule that can rapidly adjust brightness of an object image displayed on a monitor by controlling the quality of light radiating from the capsule as taught by Takahashi.

In regards to claim 14, Gazdzinski discloses a capsule medical device wherein the image-acquiring device has an illumination device 1014; and the illumination device

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operates on the basis of data parameters stored in the storage device (see Paragraph 70).

In regards to claim 16, Gazdzinski discloses a capsule medical device wherein the image-acquiring device has an image data-compressing device; and the image data-compressing device operates on the basis of data parameters stored in the storage device (see Paragraph 0015).

In regards to claims 27 and 31, Gazdzinski discloses a capsule medical device but is silent with respect to wherein the detecting circuit is a color balance and brightness detecting circuit for calculating a histogram of brightness in the image and wherein the correction amount calculating circuit adjusts color image values and illumination values. Takahashi teaches of an analogous endoscope wherein luminance signals are fed to a histogram processing circuit 16, from which the average luminance value is calculated and adjust the brightness of an object image displayed on a monitor (see Col. 4, Lines 9-34). It would have been obvious to one skilled in the art at the time the invention was made to include a detecting circuit able to adjust the illumination values in the apparatus of Gazdzinski in order to better control light parameters and provide for optimization of image quality as taught by Takahashi.

In regards to claims 29-30, and 32, Takahashi discloses a capsule medical device, wherein the correction amount calculating circuit has a reference data which is previously stored and calculates the data parameters on the basis of the reference data and wherein said reference data is a histogram of standard luminance distribution positions (see Figs 4-5 and Col. 2, Lines 25-30). Furthermore, the correction amount

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calculating circuit calculates an effective imaging range of the image-acquiring device from the luminance distribution of the image (see Fig. 6). It would have been obvious to one skilled in the art at the time the invention was made to calculate data parameters on the basis of reference data in the apparatus of Gazdzinski to ensure that the brightness of the object image displayed on the monitor is maintained at a constant level and provide for optimization of image quality as taught by Takahashi.

Claims 11, 14-16, 24 and 26-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0117491 to Anvi et al.

In regards to claims 11, 14-16, 24, 27, 29-32 and 36, Anvi et al. disclose a capsule medical device system comprising: a capsule medical device 30 inserted into a body cavity; an external device for transmitting and receiving data, to and from the capsule medical device, by means of radio communications (see paragraph 0056); a storage device, provided in the capsule medical device, the storage contents of which are rewritten on the basis of data parameters transmitted to the capsule medical device from the external device (see Fig. 2); an image acquiring device provided in the capsule medical device which acquires images of the body cavity and operates on the basis of data parameters stored in the storage device (see paragraph 0034); a detecting circuit for calculating a luminance distribution of the images; and a correction amount calculating circuit provided for generating data parameters directly from the luminance distribution calculated by the detecting circuit and a reference histogram of standard luminance distribution positions (see paragraphs 0060-0079). Anvi et al. is silent with respect to the detecting circuit and calculating circuit being located in the external

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apparatus. However, Anvi et al. teach of using an external power source in place of the internal power source 44 (see paragraph 0045-46). Thus demonstrating that it is well known in the art that internal components of the capsule device may be placed externally. It would have been obvious to one skilled in the art at the time the invention was made to place the detecting and calculating circuits in the external communicating device in the apparatus of Anvi et al. to allow for the construction of a smaller and more compact capsule as taught by Anvi et al. and is well known in the art.

In regards to claims 26, 28 and 33-35, Anvi et al. disclose a capsule medical device system, wherein said external device transmits a command for switching an imaging mode based on a position of said capsule medical device in the body cavity and wherein the correction amount calculating circuit adjusts position data of an image sensor (see paragraphs 0060 – 0073 and Figs 6-11) .

Response to Arguments

Applicant's arguments filed September 5, 2006 have been fully considered but they are not persuasive.

Applicant states that because Takahashi teaches that the average of the luminance value is used to regulate the light, the reference therefore fails to teach meet the limitations of the independent claims 11 and 24. However, Takahashi the luminance value calculator successively calculates a luminance value indicating brightness of the object image, on the basis of said image-pixel signals. The light-adjuster adjusts a quantity of light radiating from the distal end of the video-scope on the basis of a difference between the luminance value and a reference value indicating a proper

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brightness of the object image at regular-time-intervals, such that the brightness of said object image displayed on the monitor is maintained at constant level. Then, the determiner determines whether halation has occurred on the object image displayed on the monitor, on the basis of the luminance value (see Col. 2 Lines, 10-40 and Col. 4, Lines 3-40). Thus, as broadly as claimed, Takahashi discloses a detecting circuit 16 provided in the external device for calculating a luminance distribution of the images; and a correction amount calculating circuit 22 provided in the external device for generating data parameters directly from the luminance distribution calculated by the detecting circuit.

Furthermore, Takahashi discloses a system wherein the calculating circuit adjusts color image values and illumination values. In the white balance circuit 14, the digital image-pixel signals are subjected to a white balance adjustment processing. In this embodiment, the digital image-pixel signals are adjusted such that the ratio of R, G, B signals is respectively "1:1:1" when a white object is photographed by the video-scope 30. Thus, as broadly as claimed, the luminance distributions values of R, G, B signals are calculated to insure the balance of the three is in a ratio of 1:1:1.

Applicant's arguments with respect to claims 26, 28 and 33-35 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Kasztejna whose telephone number is (571) 272-6086. The examiner can normally be reached on Mon-Fri, 8:30-6:00.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJK

11/27/06



LINDA C. M. DVORAK
SUPERVISORY PATENT EXAMINER
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